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ABSTRACT

One of a series of special reports issued by Project Baseline, a national study of vocational education and manpower training, the study attempts to determine whether the disadvantaged and handicapped have been served by the Vocational Education Act of 1963, the Amendments of 1968, and subsequent legislation. The report is based on a review of Project Baseline data, 450 Educational Research Information Center documents, government documents, and other primary sources. Providing a prototype for delineating program impact, the basic components of a delivery system model are described: (1) policy establishment and decision making; (2) development, organization, and management of curriculums; (3) identification and recruitment of persons into training programs; (4) diagnostic procedures for identifying and assessing individual problems; (5) supportive services; and (6) program evaluation strategies and techniques. Program impact is discussed in relationship to policy, curriculum strategies, identification and recruitment strategies, diagnostic procedures, supportive services, and program evaluation strategies. A brief summary of projects by States shows the diversity of programs. Finally, recommendations are proposed focusing on the need for more programs for the disadvantaged and handicapped, personnel training, the development of an individualized instruction program, and the need to develop guidelines for interagency cooperation. (MW)

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IMPACT OF VOCATIONAL EDUCATION AND MANPOWER TRAINING ON TARGET POPULATIONS: ETHNIC GROUPS THE DISADVANTAGED, HANDICAPPED, UNEMPLOYED, AND UNEMPLOYABLE ADULTS

Project Baseline Supplemental Report

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For
Project Baseline
Northern Arizona University
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NOTE

For better continuity and brevity, Dr. Wall has included four of the target groups (ethnic groups, disadvantaged, unemployed and unemployable adults) under the heading of "disadvantaged". A more detailed statement of definitions may be found on pages 3 and 4 of the Introduction.

The Editor

The points of view and opinions stated herein are those of the author and do not necessarily represent the views and opinions of Technical Education Research Centers, Inc., Project Baseline or Northern Arizona University.

It would hardly be possible to reach everyone identified in the Vocational Education and manpower legislation of the 1960s, but for nearly one billion dollars annually there should be an impact. It is the nature of that impact as well as its extent which needs to be examined.

Arthur M. Lee. Learning a Living Across the Nation: Vol. I. Project Baseline, First National Report, Flagstaff: Northern Arizona University, November 1972, p. 418.

ABSTRACT

This report is based on a review of the massive quantity of Project Baseline data on the disadvantaged and handicapped, mainly regular annual and special reports from State Divisions of Vocational-Technical Education. Also studied some 450 documents contained in the Educational Research Information Center system; materials disseminated through the national network of Research Coordination Units and the National Network for Curriculum Coordination in Vocational-Technical Education; documents and papers from Federal government offices; information furnished by colleagues; and materials from personal files.

Findings from this review reveal:

(1) The need to focus on the individual and his/her problems,

(2) The need to develop a comprehensive National-State-local program aimed at total human resource development. Such a program would have an information and data system operational at all three levels, integrate vocational and personal guidance and training, offer a wide variety of occupational and educational options, and provide job placement and adjustment assistance.

(3) The need to train personnel to operate this comprehensive program,

(4) The need to develop an individualized instruction program in every subject area to serve as the core approach to the development of all human resources.

(5) The need to develop continuing guidelines and procedural technology for cooperation among agencies at all levels.

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INTRODUCTION

Over the years, vocational educators have struggled to improve the quality, scope, and image of Vocational Education. They have tried to prevent their programs from becoming the "dumping grounds" for students who were unable to succeed in "general" and "academic" education programs. At the same time, many vocational educators have attempted to structure special programs appealing to persons failing in "regular vocational" programs. Ironically, students neglected by "general," "academic," or "regular vocational" programs are those in greatest need of training. Of necessity, Vocational Education has expanded or created special alternatives to the traditional programs in order to better serve the disadvantaged and handicapped.

The educational community was directed to the plight of the disadvantaged and handicapped in 1962, when the President's Panel of Consultants delineated the problems of a group of young people whom they labeled Youths With Special Needs. This report, culminating a tremendous amount of research conducted in the late 1950s and early 1960s, was instrumental in leading to the passage of the Vocational Education Act of 1963. Under the 1963 Act, programs were to be established to meet the special needs of those students described in the report of the President's Panel of Consultants. Section 4(A) of the Act states, "Vocational Education shall be provided for persons who have academic, socioeconomic, or other handicaps that prevent them from succeeding in regular Vocational Education programs."

The Vocational Education Amendments of 1968 mandated that special programs be developed with the aid of Federal funding. Each State was required by law to designate at least fifteen percent of available vocational funds for the disadvantaged. Another ten percent was to be set aside for programs to serve the handicapped. As a result of legislation and the availability of funds, numerous programs have been implemented in an effort to respond to those with special needs. This report is an attempt to determine whether the disadvantaged and handicapped have been served by the Vocational Education Act of 1963, the Amendments of 1968, and subsequent legislation.

Purposes of the Report

The report was undertaken with four purposes in mind. One purpose was to examine activities and services designed to impact on the disadvantaged and handicapped. Specifically, a search was made to identify those activities and services which were deemed successful in reaching and tangibly helping the disadvantaged and handicapped.

Another purpose of this report was to encourage the improvement and expansion of programs for the disadvantaged and handicapped. Following the description of the activities and services, the report contains recommendations, which should lead to the improvement of programs for the target groups.

A third purpose was to encourage initiation of programs for the disadvantaged and handicapped in areas where there are no special programs, despite clearly defined needs. Various reasons have been given as to why programs have not been developed to serve the disadvantaged and handicapped in certain areas of the Country. Nevertheless, it is hoped that some of the findings reported herein will inspire and aid in the initiation of programs for the target groups.

A fourth purpose of this report was to create an awareness of program impact among educational leaders who influence policy and make decisions concerning programs for the disadvantaged and handicapped. This report is intended for use by persons holding political or administrative posts at the State, regional, and National levels.

Dimensions of Impact

Vocational Education for the disadvantaged and handicapped is a multi-faceted undertaking. Success rests in treating the specific problems that prohibit such persons from participating in regular or traditional Vocational-Technical Education programs, while simultaneously taking into account their general occupational needs. Individualized content, instructional methods and techniques, and special services are the mainstay of programs for the disadvantaged and handicapped. Consequently, defining the precise needs of each participant is paramount.

Many of the Vocational Education projects later described in this document reflect the diversity and complexity of programs for the disadvantaged and handicapped. Because of this diversity of program type, overall impact has been difficult to measure; in fact, many program results defy quantification. In addition, neither legislation nor rules and regulations developed at the Federal, State, or local level offer any standard criteria for measuring or comparing the success of these programs. Hence, the question needs to be asked at the outset: What are acceptable evidences of impact?

A major problem in drafting this report has been that impact data are either unavailable or inaccessible through the normal sources. Student follow-ups, for example, generally provide reliable information on program outcomes. The extent to which and rapidity with which students obtain jobs related to their training and aspirations are evidences of impact. Yet, data showing the long-term effects of programs for the disadvantaged and handicapped are extremely limited.

Cost-benefit studies have become another important measure of program effectiveness. Information from such studies usually gives some idea about the efficiency with which students have been trained, the efficiency with which they have been placed in jobs directly related to their training, and the extent to which they have become upwardly mobile. However, cost-benefit studies of special programs are apparently non-existent.

Some researchers contend that the only way to evaluate the impact of programs for target groups is through the application of experimental re-

search designs. Experimental methods are most appropriate when cause and effect is at issue, as it is in determining the value of new practices and innovations. There are a number of experimental designs, but the "classic" one is the pretest/post-test control (parallel) group factorial design, wherein complete control is exerted, relative gain is determined, and amounts of gain are compared.

This design can be produced in a laboratory setting, but in field research many circumstances prohibit its use. Any departure requires adjustments and necessitates replication, if cause-effect inferences are to be drawn. The field bases for comparing one delivery system with similar components of another, usually are so diverse that exerting necessary control is impossible.

The problems encountered in conducting experimental studies in the field are complicated by the fact that control groups are hard to find in small populations. Also, the lack of research expertise among project personnel in most local programs often precludes the conduct of experimental studies where a high degree of control must be exercised to show that the program treatment was the cause of any gain.

Experimental studies are needed. In view of existing limitations, the optimum design probably would be one using no control group. Under this method, the experimental group is observed at a series of points in time, is then subjected to the experimental treatment, and after treatment is observed on one or more additional occasions. To date, few, if any, studies of this type have been conducted in programs for the disadvantaged and handicapped.

The question remains, then: What are acceptable evidences of impact? It seems that one must be content to use available input and outcome data in discussing the results of programs for the disadvantaged and handicapped, thus, relying on relatively short-term, or less substantial, indications of program success.

Many programs designed to train the disadvantaged and handicapped tend to ignore the causes of the student's condition. Program designs which pay only limited attention to the participant's physical, mental, or social handicaps are obviously inadequate. Therefore, any evidence that a program's design components have met the needs of the disadvantaged and handicapped has been treated as acceptable evidence of impact.

Composition of Disadvantaged and Handicapped Groups

There seem to be no standardized criteria for including persons in either the disadvantaged or handicapped categories. Lack of such criteria poses problems in identifying prospective participants for programs designed to help them. Such problems impact on policy and decision-making, influence the language used in legislation, and obscure the rules and regulations established as a result of legislative interpretations.

As used in this report, "disadvantaged" and "handicapped" are generic terms meant to encompass all persons who exhibit characteristics which cause

them to be labeled either impoverished, deprived, unemployed, chronically unemployed, underemployed, ethnic and minority groups, dropouts, non-recidivists and rehabilitants, emotionally disturbed, mentally disabled, physically impaired, or combinations of any of these. The use of such universal terms has obvious shortcomings, one of which is that programs for specialized groups cannot be discussed in detail in a brief report such as this one.

A review of State Plans for Vocational Education reveals some similarities in basic definitions of both the disadvantaged and the handicapped, but a wide range of criteria are given for including persons under each of these two groups.

Disadvantaged Defined

The definition most frequently used to describe the disadvantaged refers to those persons who have academic, socioeconomic, cultural, or other handicaps that prevent them from participating successfully in regular Vocational Education programs and who require specially designed educational programs or related services. The term includes persons whose special needs for such programs or services results from poverty, neglect, delinquency, or cultural or linguistic isolation from society at large; it does not include physically or mentally handicapped persons unless they also suffer from the handicaps described above.

Handicapped Defined

The most common definition of the handicapped refers to those persons who are mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or otherwise physically impaired. It includes persons who, because of such conditions, cannot participate successfully in regular Vocational Education programs and who require specially designed education programs and related services.

Inadequacy of Definitions

The above definitions are not complete in and of themselves; however, they parallel the terms used in legislation. Vocational legislation labels as disadvantaged or handicapped those persons who cannot succeed in regular Vocational Education programs, but it does not offer a standard definition of what constitutes success in a regular program. The definitions above are not the same as those used in other Federal legislation to describe disadvantaged and handicapped persons. Hence, project evaluation results and research findings emanating from two separate Federal agencies are difficult to compare. Since comparisons are so difficult, interpretation and impact assessment are likewise difficult to derive.

A MODEL DELIVERY SYSTEM

Claims concerning the impact of programs for the disadvantaged and the handicapped have been more widely publicized than well-documented statistically. Such claims probably are a result of confusion over program goals and an over zealous pursuit of evidence to prove a program's success.

Some program evaluators have attempted to use dramatic measures, such as gains in performance on nationally standardized tests, or single-standard measures, such as placement in jobs, to assess the worth of efforts to help the disadvantaged and handicapped.

But other measures of program impact should be applied--job advancement, for instance, as well as the contributions that both training and a job make to one's life style and self-esteem. Criterion-referenced tests, which determine how much of a specific body of knowledge a person has learned, should supplement--or possibly replace--nationally standardized (norm-referenced) tests, which merely compare one person's level of achievement with that of another.

Probably no program designed for either the disadvantaged or the handicapped can be described as completely successful or unsuccessful. The major problem, then, is one of trying to identify successful components of programs.

Therefore, the basic components of a delivery system model are described in the following pages to provide a prototype for delineating program impact.

System Components

The basic components of the model are: (1) policy establishment and decision-making; (2) development, organization, and management of curriculums; (3) identification and recruitment of persons into training programs; (4) diagnostic procedures for identifying and assessing individual problems; (5) supportive services; and (6) program evaluation strategies and techniques. A discussion of each of these follows.

Policy Establishment and Decision-making

Any effort at developing policy for programs for the disadvantaged and handicapped must begin with sound philosophy and principles. Policy establishment and decision-making also must be undergirded by knowledge of individual and group characteristics. While it is difficult to generalize about either the disadvantaged or the handicapped program, planners need to be aware of research findings which can be applied as universals.

For example, it is quite well established that disadvantaged people tend to be motivated more by extrinsic than intrinsic needs. Consequently,

providing immediate, positive reinforcement has proved to be an effective approach in daily work with the disadvantaged. Intrinsic motivational techniques seem to be more applicable in long-range goal formulation and individual achievement.

One specific matter of policy concerns how the efforts to aid the disadvantaged and handicapped are set up. Some local school systems and agencies develop sections for the target groups within the required curriculum. Others set up separate programs with separate curriculums; some of these have been successful, but evaluations have revealed that in some instances "separateness" tends to stigmatize program participants.

Another matter of policy is that of program admissions. Policy in this regard should focus on the commitment to meet student needs as opposed to a commitment to institutional resources and philosophy.

Frequently, students are admitted on the basis of predictive instruments that are supposed to indicate the extent to which a student will be successful. Unfortunately, none of the predictive instruments currently in use takes into account all the economic, educational, and cultural differences of disadvantaged and handicapped persons.

Among other policies are those relating to the participation of advisory committees and community and industrial leaders in formulating programs. The extent to which advisory committees and the community at large are involved will influence in large measure the impact of programs. Committee members can be used both in establishing policy and in determining guidelines for the conduct of programs. They can assist in public relations efforts and be of great service in program evaluation and follow-up of graduates.

A crucial point is whether general policy directives issued at upper administrative levels can be modified at local levels to meet unanticipated needs and goals. Whatever the case, both policy statements regarding the use of community resources, and policy modifications should result in the establishment of written goals and objectives.

Certain policies established by agencies working with the disadvantaged and handicapped reflect the attitude of the leadership. One administrator may be complacent, ignore problems, and do very little. Another may take the initiative, institute innovative programs, and aggressively seek to serve the disadvantaged and handicapped populations. Successful policies, then, are extensions of positive and sympathetic leadership.

Development, Organization, and Management of Curriculums

Curriculum is directly related to policy. It is a line of action set in motion--and usually directly controllable--by an educational policy maker, or policy makers.

Broadly defined, curriculum includes all the educational experiences that contribute to the affective, cognitive, and psychomotor development of the student. However, this discussion will be limited to those activities

that are directly related to a Vocational Education program designed for the disadvantaged and handicapped.

Over-all, most Vocational Education programs for the disadvantaged and handicapped focus on job preparation. To this end, Vocational Education curriculums must be geared to provide training in the shortest possible time.

Many of the traditional vocational programs--as has been said many times about traditional academic programs--do not meet the needs of disadvantaged students. Conventional programs unresponsive to the needs of disadvantaged students may be either a cause or a result of their deprivation. This, coupled with the fact that many of the disadvantaged and handicapped are atypical in their learning behavior patterns, indicates that they need alternatives.

Traditional programs must be replaced or at least modified by changing the sequence of curriculum content and the method by which it is presented. The experience has been that the same innovations will not suit all disadvantaged or handicapped persons. Still, in assessing program impact, it must be determined which modifications have the greatest positive influence on the largest number of persons. Generally, the curriculum concepts of moving from the simple to the complex, from the practical to the theoretical, seem to be most successful.

In terms of meeting the needs of each student, individualized instruction leads to the most success. Students' progress can be observed, managed and paced closely, and help can be given when needed. Hence, achievement on the part of each individual is more likely.

Curriculums for the disadvantaged and handicapped should not be based on the so-called textbook approach and its corresponding units of time. The most appropriate materials are those using performance-based objectives with criterion-referenced measures formulated in modules and sequenced logically. When textbooks are the primary basis for the instructional program, often they become the ends rather than the means in the learning process. Textbooks too frequently are dull and uninspiring; many do not permit the flexibility and variety that make learning interesting.

Many problems in the development, management, and organization of curriculum materials for the disadvantaged and handicapped stem from the fact that many of the available curriculums and materials have not been subjected to rigorous field testing or validation. Most schools rely almost completely on committee examination and review of materials and, in some cases, discussions with sales representatives. Only rarely do selection committees require student performance data obtained from field tests of the materials conducted in local classrooms.

There are a number of traditional techniques for implementing curriculum materials. First of these is the use of advisory or craft committees in each of the subject matter areas to be included in a program. Persons serving on these committees should be thoroughly familiar with up-to-date skill requirements and trends in occupational patterns, and the characteristics of the disadvantaged and handicapped.

The second standard technique is that of inservice education for teachers and other professionsl personnel, which should enable them to better understand and serve the disadvantaged or handicapped students. Further inservice work may be devoted to assisting program personnel to integrate into Vocational Education courses the content of basic subjects such as English, mathematics, science and reading.

Another technique used in some programs for the disadvantaged and handicapped is differentiated staffing. Under this arrangement, the more capable staff can be used more efficiently, and the indigenous workers, from the same communities as the students, can be extremely helpful. However, differentiated staffing requires a tremendous amount of inservice training.

Identification and Recruitment of Persons Into Programs

For programs to be designed especially for them--and then to participate in these programs--the disadvantaged and the handicapped must, obviously, be identified within the general population. This is done according to specific legislative language and resultant rules and policies. Usually, identification of persons for a program is successful if various agencies--the schools, welfare office, employment office, etc.--work together.

Adequate recruitment procedures require at least two basic ingredients. First, communication channels must be open both within the educational system, and between the educational system and the community at large. Second, information about programs must be communicated in a manner indicating that the message comes from an authoritative source.

Recruitment in urban areas often must be handled somewhat differently than in suburban and more rural areas. In urban areas, community involvement in ongoing school programs usually is very low, and the educational system too frequently is viewed with suspicion. Indigenous personnel can help bridge the gap between an institution and the community and, subsequently, communicate program information to the target group.

Recruitment frequently involves incentives such as payment for class attendance. However, when pay incentives are out of line with job status and skill requirements, or when pay during training is higher than potential starting salaries, the discrepancies lower morale and defeat the purpose of the program.

Recruitment measures include personal follow-up of recent dropouts. A counselor or other staff member may visit the individual to offer services and assure him that he may return to the program at any time without being penalized.

Within the schools, disadvantaged students often develop an interest in special training programs after guest speakers discuss various occupations. Senior high students may visit junior high schools to inform the younger students about vocational programs offered in senior high. The old standby of open-house or orientation day has frequently proved beneficial for students, parents and local citizens.

Following are questions that seem pertinent to this system component: (1) How do employment opportunities and wage rates affect the ability of program personnel to recruit and motivate local disadvantaged and handicapped persons? (2) Are there wage discrepancies which affect the morale of trainees, project personnel, and work station supervisors in cooperative work experience programs? (3) How do disadvantaged and handicapped community residents view the role and function of a local program designed to prepare them for employment? (4) How do cooperating institutuions and employers view the program? (5) Is any stigma attached to trainees in the program or on the job? (6) What information sources are used by the disadvantaged and handicapped to find out about programs designed to help them receive training and ultimately to gain employment? How effective are the media in disseminating information about such programs?

There are other questions that need to be examined in recruiting disadvantaged and handicapped persons into training programs. For example, what motivates them to consider entering the programs? How are their motivations influenced by the varying lengths of time that they have existed in disadvantaged or handicapped conditions? How are their motivations affected by varying degrees of deprivation? What techniques seem best for selecting trainees in order to maximize motivation at the time of entry into a program?

Diagnostic and Pre-assessment Procedures for Identifying Individual Characteristics and Problems

In regular programs, newly recruited Vocational Education students may be given simply a handbook of rules and a description of course offerings to help them decide about courses as well as plan a career. This method is especially inadequate for the disadvantaged and handicapped. For them diagnostic and pre-assessment procedures must constitute a well organized and integrated system of counseling and testing. Prescriptions of course work should be based on analysis of the findings.

Following recruitment, the first step in working with the disadvantaged person is to examine and discuss his or her interests, aspirations, abilities, limitations, and career choices and objectives. Numerous standardized tests are available--the major problem is to make sure that tests used are free of cultural bias, which is detrimental to accurate diagnosis. In addition to standardized tests, diagnosticians rely on in-depth interviews and simulated work experiences to help identify a student's interests and get a more accurate profile of his abilities. If available, information supplied by former teachers and social workers also should be reviewed, along with recommendations from other persons.

The diagnostic and pre-assessment procedures should include efforts to determine the person's knowledge of the world of work and his awareness of educational and employment opportunities. In addition, information should be obtained concerning the person's sense of worth and self-esteem. Only then can staff members begin to recommend solutions to an individual's problems, prescribe curriculum materials, and delineate skill preparation routes.

Supportive Services: Remedial, Counseling, Placement

Supportive services are those non-instructional activities provided to the disadvantaged and handicapped to maintain or support their emotional, social, and material needs at a level that will assure their success in a program. Such services include remedial reading and mathematics, tutoring, continuous guidance and counseling, peer group counseling, socialization activities, job placement, and job adjustment assistance. Financial aid, legal aid, and medical and mental health services are other services which may be required.

Supportive--or special--services must be interfaced with the other activities and services of the delivery system. Quite often, it is through supportive services that the most vital success factors of a program can be achieved.

Supportive services must encourage the development of positive self-concepts among the disadvantaged and handicapped, and ensure a trainee's initial success in the program. The entire school or institutional staff must be involved in making the supportive services viable. Job placement must be a key function of supportive services--it is generally viewed as the best measure of program effectiveness. Over-all, staff must exhibit expertise, dedication, and human concern.

Program Evaluation Strategies and Techniques

Evaluation is an essential tool in both planning and development. In too many instances, evaluation has been misconstrued as a final judgmental process. Such a view creates tremendous resistance on the part of project personnel who operate programs for disadvantaged and handicapped persons. Evaluation efforts always should be directed toward measurements that will aid in diagnosis as well as clarify and improve program direction.

Follow-up studies of graduates of training programs for the disadvantaged and handicapped are regarded as a viable form of evaluation. They furnish feedback that can be used for adjustment, revision, and redirection of training programs.

Several principles of evaluation must be kept in mind. First, the evaluation should determine if the program achieved its stated objectives. Some researchers call this the "face validity" of a program.

Second, the population of disadvantaged and/or handicapped persons for whom the program was designed to serve must be taken into account. This should determine the reliability of the program objectives.

Third, the efficiency and effectiveness of the program should be explored through comparisons with other programs which have similar objectives and designs. A valid comparison of programs requires an experimental research design exerting a great deal of control, plus a great deal of expertise on the part of those who perform the evaluation. This frequently discourages staff at the local level from conducting this type of evaluation.

Without proper evaluation, practitioners or staff personnel tend to make program adjustments based on intuition and "gut" feeling. Properly designed evaluation studies eliminate intuitive judgments and adjustments.

If, as is normally the practice with self-styled and uninformed critics, training programs are evaluated on the basis of the single criterion of job placement, then placement must be the only objective of the program. Such narrow focus on the part of the evaluator presumes that program designers and operators have certain controls over job creation and other economic development activities in the local community. No documents reviewed for this report revealed such control by any training program. However, job development definitely should be a part of the placement efforts in an ideal program.

Although placement is a vital success factor and the easiest to evaluate, many formative evaluation approaches reveal the interfacing of other crucial questions with program strategies designed to answer those questions. The following example used in North Carolina shows the tie between question and strategy:

EVALUATION QUESTIONS	STRATEGIES
Where do we want the trainee/student to go?	OBJECTIVES
Where are the trainees/students now?	DIAGNOSIS & PRE-ASSESSMENT
How do we help them get there?	DIVERSIFIED & PERSONALIZED LEARNING EXPERIENCE
How can we tell if they are getting there?	PROGRESS CHECKS, SELF-EVALUATION, INSTRUCTOR-EVALUATION
What do we do if they are getting there?	REINFORCEMENT EXPERIENCES
What do we do if they are not getting there?	REDIRECT LEARNING EXPERIENCES
How will we know when they get there?	POST-ASSESSMENT
How do we prove they have been there?	GRADING & REPORTING

The above strategies are components of an individualized instruction model. Hence, they are integral to the comprehensive delivery system described in this report.

IMPACT OF PROGRAMS

In the early and middle 1960s, Vocational Education and manpower training programs designed for the disadvantaged and handicapped were relatively new. Impact results focused on program input rather than output; that is, evaluation efforts were more process-oriented than product-oriented. Hence, the data are more descriptive of participant characteristics than substantive concerning results.

In the late 1960s and early 1970s, synthesizing studies of available data revealed that dimensions and extent of impact were not as readily discernible as desirable. One of these studies, conducted by Social, Educational Research and Development, Inc. (1968), indicated that Vocational Education programs had limited effect on the disadvantaged. The study also found a disparaging lack of evaluation data about such programs.

This same lack of information was alluded to in the Progress Report of Vocational-Technical Education Program Development for Persons with Special Needs by States (1968), which indicated that, although programs for special needs groups had been inventoried, the accumulated valuable experiences had never been analyzed, evaluated, or made available to other practitioners.

Lockette and Davenport (1971) lamented the fact that their "review of the literature indicated a critical lack of meaningful data available on occupational education for the urban disadvantaged," and furthermore, that there was "considerable duplication of data" between studies. Similarly, Raepple (1972) noted that, "because of the newness of many programs in the State (Florida) in providing special services for the handicapped, job placement records were sparse and incomplete." She concluded that job placement, including assessment of employer relationships, evaluation of job readiness, length of follow-up after placement, and types of jobs secured for the handicapped, needed special study.

In a still later study, Weisman (1973) observed that programs for the disadvantaged were being implemented without assurance they would work and without proper research designs that would yield information about causes and effects of treatment. "Rarely is there an opportunity to compare results between programs so as to find the most productive activities."

Continuous synthesis of proven strategies and techniques is needed. The trends seem to be toward greater sophistication in program design, improved delivery systems, and more viable evaluation procedures in all programs due to corresponding advances in program and project staff development. Probably the greatest strides have been made in devising structures for improved coordination of planning and programming, which has involved better utilization of community resources, improved communications and data systems, and vastly improved systems for deriving multi-level policies.

Impact of Policy

National policies and guidelines have helped improve State planning for the development and implementation of programs for the disadvantaged and handicapped. To receive Federal funds and technical assistance for such Vocational Education programs, States are required to submit one-year and five-year plans. Other assistance to the States and local school districts was offered during the early 1970s in the form of two U.S. Office of Education documents containing policies and related information. The first, Suggested Utilization of Resources and Guide for Expenditures: SURGE 1970 (1970), was aimed primarily at providing methods for implementation of programs. The second, Suggested Utilization of Resources and Guide for Expenditures: SURGE 1972 (1972), was to aid in identifying and classifying the disadvantaged and handicapped. Its chief goal was to move toward standardization in order to facilitate annual reporting; this, in turn, would support comparisons of programs among States.

On the State level, decision-making and policy development have been enhanced through management information systems. Such systems, which yield information about needs, thus aiding program development, are either already implemented or under development in most States.

Some States follow the commendable practice of having external evaluations made of their State plans. This aids in determining the extent to which the plan complies with the requirements of Federal legislation and rules and regulations. It also ensures that definitions and descriptions of programs, persons, geographic areas and criteria are clear and accurate.

Concerning program operations policy, those involved with either planning or operating programs for the disadvantaged and handicapped agree that the problem of definition is one with wide ranging implications. Legislation, rules, and regulations define terms fairly well, but in actual operation, adjustments and adaptations must be made. According to Lee and Sartin (1973), "the trouble seems to be not so much in applying the definitions to particular students, but in the next step of deciding what constitutes special vocational preparation for these students." In most of the material reviewed for this report, the definition problem was resolved by assuring that as nearly as possible, all obstacles to meeting each individual's unique needs would be overcome. Future legislation should be drafted with this principle in mind.

Seventeen recommendations concerning policy for comprehensive manpower programs were made by the National Advisory Commission on Rural Poverty (1967). These focused on: (1) meeting the specific needs of both workers and employers; (2) establishing manpower services in locations convenient to both workers and employers; (3) increasing employers and job opportunities; (4) providing the capacity to assist workers and employers at the time they most need it; and (5) developing structures for applying manpower policies actively and aggressively at local, State and National levels.

These and other recommendations led to the implementation of coordinated programs and activities, such as the Comprehensive Area Manpower Planning Systems (CAMPS) and the Area Manpower Institute for Development of Staff (AMIDS). Similar policy recommendations have caused almost every State to appoint a Manpower Planning Council, which generates annual comprehensive manpower development plans. These annual plans have provided impetus for greater standardization of the criteria used in identifying and defining both disadvantaged and handicapped persons. Similarly, criteria have become somewhat more stan-

dardized for describing barriers to employment identified with the disadvantaged and handicapped and the subcategories of these groups, such as the elderly, veterans, undereducated adults, and farm workers.

From the late 1960s to the present, there also has been a trend toward greater accountability in educational and training programs. As a result, many States have imposed rather stringent requirements on local education agencies seeking public funds for programs.

For example, Texas, in its State Plan for Vocational Education for the handicapped, indicated that primary emphasis was to be integration of those students into regular vocational classes, as opposed to separate programs for them. After the plan was approved in June 1969, the State drafted guidelines and criteria for evaluation proposals, and sent these to the local school districts. The school districts then submitted their proposals, which were evaluated according to whether they met the priorities and included all the elements of a well-designed program.

Most other States have implemented policy requirements for disadvantaged and handicapped programs. If this practice continues, the problem of identifying successful program components will be made easier.

As indicated, program policy for disadvantaged and handicapped persons is incorporated into State plans and reports. In reviewing annual descriptive reports submitted by each State, it was noted that some States said "additional programs" were implemented during the year or were to be added the following year. Use of the term "additional programs" suggests direction, not magnitude. Objectives and goals stated in quantitative and measurable form denote magnitude of effort. Priorities for each goal and objective should be explicitly delineated. Assignment or ranking of program priorities should be made on a short-term and long-term basis according to kinds of occupational programs; level of programs (secondary, post-secondary, etc.); type of recipient (disadvantaged, handicapped, regular, etc.); and geographical location within the State.

Because Vocational Education programs for the disadvantaged and handicapped are multi-agency, some States also have included in their plans policy statements concerning cooperative agreements, which delineate agency responsibilities. The following policy statement related to the handicapped was excerpted from Part I of the Florida State Plan for the Administration of Vocational Education (1969):

> Cooperative agreements.--Among the agencies, organizations, and institutions concerned with handicapped persons with which the State Board may enter into agreements are the Division of Adult Corrections, Youth Services, Mental Health, Retardation, Health, Family Services, and Vocational Rehabilitation, Department of Health and Rehabilitative Services. A written agreement has been established between the Division of Vocational, Technical, and Adult Education and the Exceptional Child Education Section of the Division of Elementary and Secondary Education, Department of Education, providing for cooperation in the provision of special Vocational-Technical Education programs or instruction and services for handicapped in-school youth meeting the criteria established in the section of the State Plan entitled "identification of handicapped persons."

The Florida plan also contains this section concerning agency responsibilities in identifying, referring and accepting the handicapped:

> Criteria for Identification.--The State Board and local educational agencies will use the following criteria in identifying handicapped persons who are at least fourteen years of age to be served by Vocational-Technical Education programs:
>
> 1. A handicapped youth shall have been identified by the chief administrative official of a local educational agency or a representative of the Division of Vocational Rehabilitation or another agency serving the handicapped to be eligible to participate in Vocational-Technical Education programs under provisions of this plan.
> 2. The physical handicap or mental limitation shall be such that it constitutes a substantial obstacle to employment or to job adaptation after employment.
> 3. The person's physical disability or mental deficiency shall make adequate Vocational-Technical Education impossible without the provision of special facilities or instruction services.
>
> Referrals.--Handicapped persons may be referred for Vocational-Technical Education programs or classes by local education personnel or by appropriate local and State agencies, Included among these agencies are: Division of Vocational Rehabilitation, Bureau of Blind Services, Division of Mental Retardation, Division of Youth Services, Bureau of Crippled Children, and other such public health and welfare agencies.
>
> Acceptance.--Handicapped persons will be accepted into Vocational-Technical Education programs of local educational agencies upon the recommendation of a local placement committee consisting of representatives of Vocational-Technical Education, exceptional child education, other educational specialists, and representatives of other public agencies such as Public Health and Vocational Rehabilitation as appropriate to the handicapping condition.

Policy probably is the most important single component of programs discussed in this document. There is ample evidence that current policies concerning programs for the disadvantaged and handicapped are directly correlated with identified needs of persons falling into these groups. However, there seems to be demand for policies to be more directly correlated with program operations. The structures and mechanisms for bringing this about already exist. What is lacking apparently are synthesizing studies of program successes as well as evaluation reports that concentrate on financing and organizational problems. Of course, it could be argued that National policy relates more closely to the needs of target groups, whereas State and local policies relate more closely to program operations.

As mentioned earlier, many States have been developing management information systems. One of these is the Kansas Manpower Utilization System for Training (K-MUST). In a two-volume final report on the development of K-MUST, Scott, et al. (1973) presented the various modules that comprise the system, including the Student Accounting Module, the Potential Student Population Module, and the Budgeting Module. In 1972, work was begun on a Disadvantaged and Handicapped Student Module, designed to provide required information on which to base funding decisions that would ensure equitable distribution of funds. According to Scott (1973):

> Data from the Student Accounting System Module and the Potential Student Population Module are combined to analyze the participation of the disadvantaged and handicapped in regular Vocational Programs across the State. The analysis is relative to (1) the percentage of various disadvantaged groups in schools offering vocational training versus the percentage of groups in the general population being served by the schools, (2) a comparison of different program types in terms of the proportion of disadvantaged and handicapped enrolled. The statistical tool used in this analysis is the Chi Square Test of Independence.

The disadvantaged and handicapped module was tested by Jones (1973) in a study in which he examined the participation rates of five disadvantaged or handicapped groups in Kansas' fourteen area vocational schools. His test study of the module resulted in the following conclusions and recommendations:

CONCLUSIONS

1. It is possible for the disadvantaged and handicapped to enroll in regular vocational and technical programs in representative numbers.
2. Proportionate enrollment of the disadvantaged and handicapped (relative to the percent of disadvantaged and handicapped in the general population being served) has been achieved by some schools and not by others.
3. Different schools seem to have different policies (formal or informal) regarding the recruitment and enrollment of disadvantaged and handicapped students.
4. The academically disadvantaged are concentrated in programs such as horticulture, production agriculture, agriculture mechanics, auto mechanics, and diesel mechanics. All of these programs seem to be in areas where there is considerable working with the hands.
5. Non-white individuals seem to be concentrated in cooperative programs, medical services, clothing production, child care, and food production. All of these programs would appear to be training for occupations which are service oriented and of a lower paying variety.
6. The economically disadvantaged appear to be concentrated in programs like agriculture and cooperative programs.

7. The mentally handicapped appear to be concentrated in agricluture occupations, food service, and co-operative education programs. These program types all have areas where persons with limited mental capabilities can prepare for employment.
8. The physically handicapped appear to be concentrated in areas such as drafting, electronics, electrical repair, and management training. It should be noted that these programs are not necessarily prepared for physically demanding occupations.
9. The disadvantaged and handicapped may enroll heavily in a program of a certain type in one school and not constitute a heavy enrollment in that same type of program in other schools. In other words, there probably is some selection procedure exercised by school officials and these selection procedures are not uniform across the State.

RECOMMENDATIONS

1. The State Department of Education should clarify definitions used to identify the academically disadvantaged in the Kansas Student Accounting System.
2. Research on the disadvantaged and handicapped should be continued in the areas of ability to complete training and ability to acquire employment after completion.
3. If it is deemed desirable to enroll the disadvantaged and handicapped in regular programs, a Statewide policy should be developed which would serve as a guideline for recruitemnt and enrollment.
4. If it is deemed desirable to disburse funds to support training of all disadvantaged and handicapped students, some of the monies set aside should be used to provide special services for the disadvantaged and handicapped enrolled in regular vocational and technical programs. Examples of special services for the disadvantaged and handicapped are (1) tutoring services, (2) pre-vocational programs, (3) teacher aides who work exclusively with the disadvantaged and handicapped, (4) special equipment and/or facilities for exclusive use of the disadvantaged, (5) special guidance and placement services, and (6) the development of individualized instruction for disadvantaged and handicapped individuals.
5. If disadvantaged and handicapped funds are disbursed to support regular programs, the funds should be allocated on the basis of number of disadvantaged and handicapped students enrolled in the regular programs.

These conclusions and recommendations succinctly summarize potential guidelines for policy governing programs for the disadvantaged and handi-

capped. Persons who have responsibility for establishing and revising policy statements in other States would benefit from study of the Kansas experience.

Impact of Curriculum Strategies

Curricula for either the disadvantaged or the handicapped should be perceived by participants as being useful to them in solving both immediate and long-range problems, rather than being non-work-oriented and unrelated to jobs or occupational clusters. (Many people feel all curricula for all persons should have this dimension of "relevancy.") According to Campbell, et al. (1969) "the disadvantaged student sees the school as an opportunity to prepare for a productive and satisfying life despite previously acquired socioeconomic handicaps." These positive expectations, he stressed, challenge our educational system to insure that schools do not disappoint the disadvantaged, but "provide a curriculum which is dynamic and relevant to the vocational aspirations of the student."

Insofar as curriculum strategies are concerned, it is difficult to determine where "curriculum" leaves off and "supportive services" begin. The literature revealed that, with slight modifications, some regular programs were able to serve the disadvantaged and handicapped. This seemed to be true when intensive counseling was involved. In other instances, separate programs were required. Weisman (1973) put it succinctly when he stated: "It is apparent that of all the (curriculum) strategies available, the traditional one is probably least likely to succeed."

Funds from the Vocational Education Amendments of 1968 have provided assistance in implementing a sizeable number of curriculum strategies and techniques. The literature reviewed for this report showed that most of these strategies had been researched, tested, and found valid under certain conditions. Many of the strategies had been field-tested in pilot projects, and a large number had been demonstrated in an even larger number of programs following the pilot projects.

Some of the literature alluded to "special instructional programs" that had been set up especially for the disadvantaged or handicapped. In reading the descriptions of these programs, it was discovered that "special" had a variety of meanings. In one school system it meant a separate program for the disadvantaged or handicapped, whereas in another it meant combining a number of curriculum strategies to meet the special needs of students. In a third school system it meant "tracking" in only one subject-matter area. Generally speaking, "special programs" seems to mean "special efforts to solve specific problems" of the disadvantaged or handicapped student.

Following is a partial listing of the many curriculum strategies and techniques, as well as special services, used in programs for the disadvantaged and handicapped. Some of these are then discussed.

1. Pre-vocational program
2. Broadened and/or intensive guidance/counseling
3. Employability skills training

4. Communications skills training
5. Diagnostic services
6. Tutoring, coaching, reader/interpreter services
7. Individualized instruction
8. Learning laboratory (some laboratories are in permanent buildings and some in mobile units)
9. Tracking, other "special" approaches
10. Course modification
11. Flexible scheduling
12. Remedial instruction (possibly tutoring or separate classes, etc.)
13. Cooperative vocational education, work-study, etc.
14. Mini-courses (students rotate through a number of subject areas)
15. Open-entry, open-exit programs
16. Special transportation facilities and services, child care, etc.
17. Basic education (reading, arithmetic, communication)
18. Behavior modification
19. Special education equipment, services and devices

Probably no curriculum strategy was mentioned in the literature more frequently than individual instruction, and probably in no other State has it received more widespread attention than in North Carolina. Through its Demonstration/Internship Diffusion System, the North Carolina Division of Occupational Education is attempting to develop in all occupational education personnel in the State the necessary competencies for individualized instruction. In the North Carolina State Plan (1973), the State Board proposed to invest $291,000 in this type of inservice training.

Individualized instruction, as a viable curriculum strategy, has many attributes and advantages, which have specific application in programs for the disadvantaged and handicapped. Karlin and Berger (1974) elaborate on the process in their recent book. Weisman (1973) cites specific application of individualized instruction in the air-conditioning and refrigeration shop of the Cahokia, Ill., High School, where the instructor helps both disadvantaged and regular students achieve the desired performance objectives.

The literature dealing with individualized instruction stressed the importance of focusing attention on the specific needs of each student. Also emphasized was the need to encourage the teacher to use a variety of approaches, techniques, and methods in instructing students of varying backgrounds and abilities. By the same token, the use of a wide range of instructional materials was frequently recommended. Once a performance objective is established, there should be a number of alternative approaches available to the student to attain that objective. In order to meet adequately the needs of the disadvantaged and handicapped, this principle should be viewed as a key guideline.

Some curriculum practices aid in preparing the disadvantaged and handicapped to enter regular vocational programs. Such practices are sometimes placed under the category of pre-vocational strategies. An example of these was reported by the Wisconsin Board of Vocational, Technical, and Adult Edu-

cation (1972). It said that all high schools in Madison offer an enrichment program for disadvantaged juniors whose skills and attitudes need further development in order to prepare them for the cooperative Vocational Education programs or the laboratory programs in the senior year.

Strong (1972) reported the results of a Vocational Opportunity Program that allowed mentally retarded, emotionally disturbed, and physically handicapped individuals to try out jobs under hospitable conditions after instruction in such things as general cleaning of homes and businesses; home management activities, such as cooking, serving, and laundry; car washing; and car tune-up. Strong's evaluation showed:

a. Students classified as handicapped are usually more capable of productive work than they are given credit for by society and their own families.
b. Students will perform successfully under conditions in which tension is at a minimum and where much encouragement is given.
c. Students gain much personal satisfaction from the realization that they too can contribute to society.
d. Parents are generally too overprotective and therefore hinder the independence of their family members.
e. Community members may see the need for hiring the handicapped but are usually skeptical of doing so.
f. Success results from realistic goal-setting and decision-making on the part of the students, with encouragement, understanding and guidance from the staff. The class environment is one in which there is freedom to make choices as well as assume consequences of those choices.
g. Follow-up is an important part of the program as a means of insuring continued success of students.
h. Continuing contacts with many outside government and community groups in recruitment, job placement and evaluation of students is important.

In another strategy, mobile units have been used successfully to take learning laboratories to remote places. The units seem to work well in rural areas or where the clientele has transportation problems, as in the case of the St. Croix Tribe of Chippewa Indians (Wisconsin) reported by Strong (1972). Training was provided on the reservation through a mobile classroom-shop unit containing a well-equipped carpentry lab. The training received by the St. Croix was put to practical use in construction of a 17,000 sq. ft. neighborhood center, 40 new homes on the reservation and facilities in an industrial park, and in renovation and remodeling of existing substandard homes on the reservation.

In a different form of taking training to the target group, a project conducted by the Pennsylvania Research Coordinating Unit for Vocational Education (1972) provided in-home training in child care to disadvantaged mothers and other adults who already performed child care services. Approximately 120 low-income women, identified as potential entrants into the job market, participated in the experimental individualized vocational training

program, which included twelve lessons in child care services. The program was conducted in-home because the trainees were unable to participate in formal, centrally located training programs. Positive feedback from participants, an evaluation performed by an independent researcher using the interview technique, and a comparison of participant scores with those in a control group indicated that the project was successful. Evidence was available to show that the quality of child care services increased in the area served by the project.

Cooperation between two or more agencies may be required for program success. In one community, three agencies--the San Francisco Unified School District (1969), the San Francisco Post Office and the California State Employment Service--conducted a training program to demonstrate that applicants from disadvantaged backgrounds, when given assistance, could qualify for permanent employment in entry-level Civil Service positions. Five hundred positions were made available to the San Francisco Post Office for one year. The employees were selected by the Employment Service, which placed job orders in poverty areas. Because selection was not dependent on educational qualifications, it was necessary to improve the basic skills of the employees through training classes scheduled two hours a day, five days per week. Two years after placement, more than eighty percent of those trained were still on the job.

The process of sensitizing teachers and other personnel to the attributes of the disadvantaged and handicapped should be ongoing. Stevenson (1970) reported the results of a two-week institute designed to orient participants to the world of the disadvantaged and to give them methods for training personnel working with the disadvantaged. The seventy-seven participants included teacher educators, teachers, community workers, State Department of Education personnel, and counselors. An important feature of the institute was a live-in arrangement, whereby participants spent four nights in the home of a disadvantaged family. A four-month follow-up found that most participants had engaged in one or more activities designed to improve education for the disadvantaged.

Impact of Identification and Recruitment Strategies

Identification of persons who are in need of Vocational Education and manpower training programs is directly related to legislative language, rules, regulations, and policies derived therefrom. Using such guidelines, and with the assistance of cooperating agencies, an in-depth study of the characteristics of a cross-section of families usually is desirable. In the middle and late 1960s, responses from some program participants and staff members indicated that the segments of society classified as disadvantaged and handicapped had been "studied to death." In other words, they had been "observed" time and time again, but never "treated." Since the late 1960s and early 1970s, there has been a broad trend toward consolidation of such descriptive studies, as evidenced by the activities of area, regional, or interstate planning groups. These cooperative planning efforts tend to be more economically efficient than study and restudy of the same populations by a number of individual agencies.

The literature contains many recommendations concerning identification of persons who might be considered for participation in programs. It is

evident that individual evaluations of each prospective program participant are considered more crucial in handicapped programs. Such recommendations as, "Applicants should be chosen who have both maximal personal assets and limited access to better-paying, higher-status positions," were found throughout the literature. This kind of recommendation seems appropriate to highly structured situations. As Young (1969) stated, "The important consideration is not specifically how the search (identification) is accomplished, but rather that it is not left to chance."

Using a single criterion for identifying eligible program participants seems to work fairly well in a single community of very small size. However, multiple criteria usually must be applied in larger populations due to the diversity and range of severity of participant characteristics. Campbell, et al. (1969) found that, "Students who were designated by school officials as disadvantaged in one community were not so in another based on socioeconomic criteria." Flexibility of criteria was recommended for identifying prospective program participants; that is, each community should be treated as a unique demographic "case study."

Most States have adopted lengthy lists of criteria for identifying disadvantaged persons. From these lists, Wisconsin's was chosen as examplary:

1. Persons who are members of the families which have income below the poverty level as defined by generally accepted criteria;
2. Persons whose families are receiving welfare or Aid to Families With Dependent Children (AFDC) aids;
3. Persons who are identified as potential dropouts;
4. Persons who have dropped out of school;
5. Persons who are members of racial minority groups and who attend inner-core schools;
6. Persons who are underachievers whose achievement level is more than one grade below their normal class placement, whose grades are D or lower, who are two years or more behind normal grade placement based on chronological age;
7. Persons who are alienated or have personal relationship problems;
8. Persons with impairment in adaptive behavior associated with sub-average general intellectual functioning;
9. Persons who are members of migrant worker families;
10. Persons who have adverse records with police, detention personnel, etc.;
11. Persons who are linguistically isolated from the population at large;
12. Persons who are residentially or geographically isolated;
13. Persons who have other identified disadvantagements, such as ill health, poor nutrition, broken homes, out of wedlock pregnancies, unemployment, etc.

Implicit in the literature was the need for continuous reappraisal of identification criteria. Since the focus of legislation appears to be di-

rected toward the individual, it seems that funds should be distributed according to the educational needs of the individual instead of his poverty level. For example, educational achievement as determined by criterion-referenced tests, rather than the level-of-poverty index, could be used as the basis for distribution of funds.

As for recruitment, according to the literature, most efforts have been successful at least in the end--that is if one technique failed, another was immediately tried. Personally canvassing or contacting prospective program participants seemed to be most effective. Linkages with agencies serving the target group or population frequently yielded information valuable to recruitment efforts. The mass media also were used successfully in many instances to help inform and recruit persons.

However, retention of students posed a problem in some programs. The consensus in the literature was that retention seemed to be directly related to the sympathy and sensitivity of the program personnel toward the individual participant's problems. Participants, when asked what they liked about a program, frequently mentioned the physical facilities, the relevance of the curriculum, and their sense of "belonging" or social ease.

Impact of Diagnostic Procedures

Weisman (1973) stated that "specific diagnostic information must be obtained if appropriate instructional strategies and effective remedial prescriptions are to be developed for students classified as disadvantaged." Although his report dealt only with the disadvantaged, the same statement could be made about the handicapped.

The most appropriate diagnostic procedures will identify the strengths as well as the weaknesses of an individual. The alert instructor in a well-designed program will capitalize on the individual's strengths to help remedy his shortcomings, which, after all, is what good teaching does in any setting.

Diagnosis is a necessity not only at the outset, when a person has been recruited, but throughout the program. Diagnosis should be determined if the student is progressing along a planned sequence (going from the simple to the complex) or is ready to transfer laterally to related subject matter. Project staff and teachers need a great variety of evaluation and measurement instruments and techniques, if they are to establish a baseline from which individual progress can be measured.

Instruments like standardized (norm-referenced) tests probably form the largest category of diagnostic tools. However, criterion-referenced measures are being weighed as alternatives or as supplements to the traditional tests. Other useful techniques include intensive observation of persons and frequent interviews.

Impact of Supportive Services

Supportive services include a wide range of activities which make a program "person-oriented," that is, suited to each participant's characteristics and problems. The key is to use supportive services to enable the

disadvantaged and handicapped to try to succeed in regular programs--before structuring special programs.

Supportive services for the disadvantaged and handicapped usually include many services that do not necessarily come under the purview of the Vocational Education or manpower training agency. For example, a referral agency, such as the local welfare office, may have the responsibility for arranging for a participant to receive medical and dental services. The more successful programs have been those where agencies cooperate in identifying and remedying the special needs of individuals.

Personnel to operate programs and provide services are needed in greater numbers and with increased competence. The literature showed that completion rates in training programs were low when staff loads, particularly counselors' caseloads, became excessive.

As mentioned earlier, some supportive services provide financial assistance to participants during training and/or during job placement and relocation. Financial support until the first pay check arrives is often crucial to survival. There is a precedent in manpower training programs of setting subsistence payments equal to unemployment benefits. Mangum (1968) described the procedure where heads of families with three years of work experience could qualify for up to a year of training allowances equal to the average unemployment benefits in their States. Since this precedent did not cover persons who had never participated in the labor market, it excluded many of the disadvantaged and handicapped. This service subsequently has been expanded so that persons in these target groups do have access to financial assistance during training and initial employment periods. The resultant impact has been that greater percentages of persons have been placed on jobs, and a greater percentage have stayed in jobs beyond the initial paycheck period.

Job placement activities must begin long before participants are ready to enter employment. Placement services were found to be most successful when they were coupled with job creation and job development activities. After job entry, most disadvantaged and handicapped persons also require counseling and assistance for job retention, job adjustments and job advancement.

Weisman (1973) found that areas such as language development, skill development, development of positive attitudes toward work and society, knowledge necessary for employment, and basic skills and knowledge in mathematics and science were most directly related to job placement problems. This finding supports the contention that job placement *per se* is interconnected with activities and components begun earlier in a program.

Strong (1972) reported a unique special services effort designed to fill some gaps which had been identified in attempts to help minority students entering Wisconsin's Madison Area Technical College (MATC). Labeled the Commando Project, it attempted to provide special counseling and guidance to blacks and Latinos whose needs were not being met through normal channels of student services. The project was entirely managed by indigenous, non-professional ex-offenders. These "Commandos" were well received by instruc-

tors, administrators, and students. According to Strong, they made 107 personal contacts with agencies to get such things as clothing, eye glasses, hearing aids, baby sitters, Social Security, and welfare benefits. Results of the Commandos' effort were that students attended school more regularly; referral to other helping agencies was expedited; students were given help in applying and interviewing for jobs; and, finally, students were being placed in jobs.

In the late 1960s, a number of publications were released that contained ideas for changes in rural school systems to meet the needs of disadvantaged and handicapped youth. Haller (1969) suggested three general, comprehensive needs: (1) massive financial support from Federal, and State governments to provide effective counseling and training programs for rural youth; (2) development of an awareness that programs of effective guidance and provisions of social support are equally as important as facilities; and (3) training of people to utilize the motivational and information resources that already exist in providing guidance and training for rural youth.

Another document, by Griessman and Densley (1969), provides a more comprehensive list of suggestions for improving opportunities for rural youth, including the disadvantaged and handicapped. Their list includes such things as: (1) curriculum adaptations; (2) school consolidation, to include development of area and regional vocational schools; (3) mobile vocational units; (4) use of advisory councils; (5) work experience, work-study, and cooperative vocational programs; (6) intensive vocational guidance and counseling programs; and (7) expanded preservice and inservice teacher education programs.

Documents, reports and publications of this nature, written primarily by sociologists, economists and political scientists, have served well in helping to initiate actions which evolved into trends. Since 1969, there has been a discernible growth in prevocational and occupational orientation programs that include strong vocational guidance and counseling services. In addition, the rapid growth of career education is much in evidence in the educational continuum: career awareness (elementary grades), occupational exploration (middle grades), vocational preparation (upper grades), and occupational advancement (post-secondary, continuing, or adult education). However, movements of this magnitude, which pervade all educational grades and demand the use of sophisticated instructional and curriculum technology, are exceedingly difficult to evaluate. Outcomes are slow to take shape, and the usual short-term evaluation methods do not appear to be appropriate.

Impact of Program Evaluation Strategies

Evaluations of programs can and are conducted both internally and externally--internally by the staff who operate the program, externally by independent, outside consultants. Both have numerous advantages and disadvantages. However, in situations where funds for evaluation purposes are limited, self-evaluation should be initiated on an on-going basis.

To aid in self-evaluations, the California Occupational Research and Development Coordinating Unit sponsored a handbook of basic information for conducting an institutional self-evaluation of programs and services offered

to the disadvantaged and handicapped at the post-secondary level. The handbook, developed by Tadlock Associates (1972), focuses on programs and services for the disadvantaged and handicapped funded under the Vocational Education Amendments of 1968. It was developed as part of a pilot study of four community colleges, in cooperation with members of the administrative and teaching staffs, community citizens and student bodies. It contains: (1) background information about the community colleges and disadvantaged and handicapped persons in their areas; (2) a detailed plan for evaluation; (3) steps and explanations of the evaluation process; and (4) sample work (data-gathering and data-synthesizing) forms. Also included are suggested evaluation questions, a sample working diagram for the self-study process, an extensive self-evaluation questionnaire, and suggestions for evaluation staff and special committee structures.

Some attention already has been given in this report to experimental designs that will enhance program evaluation efforts. Almen (1971) satisfactorily applied this type of research method in designing and conducting an evaluation study sponsored by the Minnesota Research Coordinating Unit for Occupational Education. The study focused on the Work Opportunity Center (WOC), a vocational facility in a non-school setting with programs designed to meet the special needs of disadvantaged innercity youth. The study involved 200 junior high school youth who attended a half-day of vocational and related training at the WOC. Emphasis in the program was placed on small classes, individualized instruction, and the development of positive attitudes toward work, school and self.

The study experimentally compared the WOC with the regular school program, relying on home-school records as well as pretest/post-test measures: (1) the Vocational Development Inventory, Attitude Scale; (2) Self-esteem Inventory. After analysis of data, it was concluded that the WOC program was more effective than the regular school program in developing vocational maturity, increasing general self-esteem, and producing positive post-treatment school attitudes. One of the major recommendations of the study was that career exploration learning laboratories with highly developed pre-vocational programs be made accessible to more students. Almen's study emphasized the need for career planning, development, and exploration experiences for middle-grade level students from disadvantaged and handicapped groups.

David Williams (1970) described a research design adopted in Illinois' Project REDY (Rural Education--Disadvantaged Youth), which involved a pre-test/post-test control group in five replications. Project REDY was a five-year, vocationally oriented, family-centered educational program for which ten communities were selected to participate and paired on the basis of census data. One community of each matched pair was randomly assigned to the experimental group. A random sample of ten families or more was drawn from the disadvantaged population in each of the ten research communities. Eight different instruments were used to gather data on family values, beliefs, attitudes, and behavioral patterns. The educational program applied to the experimental group consisted of units of instruction containing behavioral objectives, content, and criterion measures in three major parts: (1) determining realistic career choices and plans for the children; (2) improving family financial management; and (3) improving family income.

After conducting the educational program, certain evaluation measures were taken in both the experimental and control groups. Many significant results were obtained, a few of which are summarized here:

1. Experimental group (EG) parents left occupational choice up to their children. Control group (CG) parents indicated no knowledge of a desired occupation for their children. The educational program helped parents set realistic educational and occupational goals for their children and encouraged them to leave occupational choice to the child. More EG than CG children had greater congruency between occupational aspirations and income level goals, which denotes ability in realistic goal-setting.

2. EG parents left the decision of place of residence up to the child; CG parents wanted their child to live near them in a rural area. This finding indicates that parents do have influence on their offsprings' economic, social, and geographic mobility. Such influence is directly related to ability and propensity to break the poverty cycle.

3. Significantly more EG children than CG children recognized that acceptable jobs could be obtained in their community if they had the necessary training. During the project, persons were made aware of job opportunities in the community and taught skills needed in them. By project termination significantly more EG than CG family members had obtained jobs, and more EG fathers desired better jobs than they held during the project. In contrast, CG fathers held little hope of ever finding better jobs.

4. By project end, significantly more EG than CG mothers were participating in community, civic, fraternal or political organizations; similarly, more EG than CG fathers were participating in job-related organizations. The project tended to reduce alienation (anomie) and caused parents to move into the mainstream of community life, all of which aids a person in determining his life-style.

5. EG parents were significantly better able than CG parents to estimate cost of post-secondary education for their children; similarly, more EG than CG children could describe ways and means of financing needed training or education. Apparently they became aware that education is a viable means of upward mobility.

6. Significantly more EG than CG families began budgeting for the household, planning purchases, using public services available in their community, improving home and living environment, and exhibiting better morale and improved general adjustment. Other evidence showed that they held strong hopes that their children could eventually break the poverty cycle.

In another project, Norton (1971) evaluated Oklahoma's exemplary Vocational Education and occupational orientation program in the Tulsa Public Schools. His approach was to select control students who had not undergone training. The program was designed to provide occupational orientation and vocational training for disadvantaged and previously unserved students in grades 5-12 in a comprehensive urban school system. His findings indicated that, at the fifth and sixth grade levels, the program successfully acquainted students with a wide range of occupations. At the tenth grade level, the

cluster skill training had a positive influence on the attitudes of girls toward school.

The Connecticut State Department of Education (1967) reported the evaluation of a Norwalk project conducted for 272 school-alienated youth--dropouts and potential dropouts--over a twenty-month period. It showed that ninety-six percent of the students were working to the complete satisfaction of their employers; seventy-one percent had found jobs directly related to their training; and over fifty percent had obtained their jobs through the school placement services. These conclusions were reached: (1) Dropouts will return to and can succeed in school in a curriculum that meets their needs, interests and aptitudes; (2) disaffection for school can be changed; (3) peer relationships stimulate healthy, personal and social adjustments; (4) parents can and should be involved; and (5) business and industry people were pleased with the persons trained in the program.

Johnson (1967) evaluated a manpower experimental and demonstration project that was conducted among 180 black males by Tuskegee Institute, Alabama. Her conclusions and recommendations were as follows:

1. The outcome of the project, for many trainees, was a high level of occupational competence which has reflected in their high rates of employment, training-related employment, and after-training wage levels.
2. The difficulty in recruiting the hard-core unemployed was partly attributable to the strong dependency relationships between the very poor and their farm landlords.
3. The project staff would have benefitted from more time to recruit and hire teachers who knew the problems of deprived adults.
4. The project would have been more effective had trainees been given financial support during the placement phase.
5. The division of project responsibilities between the director and assistant director was highly effective and could serve as a model for similar projects. It was recommended that contracts be written and programs designed to provide some flexibility in length of training time, self-selection of training area be considered, some provision be made for trainees to acquire a work record, and at least two persons be working on job development from the time the project begins.

Sharar (1969) reported the results of a project, Training Resources for Youth (TRY), which worked with out-of-school, out-of-work male youth, aged seventeen to twenty-one, to produce positive changes in the attitudes and behaviors of deprived youth. The project provided opportunities to acquire vocational, personal, and social skills. TRY enrolled 544 trainees. The results of training and evaluation showed that:

1. Forty-eight percent graduated, fourty-five percent dropped out or were discharged, seven percent terminated for reasons not related to the project.

2. Twelve percent of the graduates went to college, seventy-six percent were placed in training-related jobs, seven percent went to the armed forces, four percent were placed in nontraining-related jobs, and one percent went on to other training programs.
3. Average starting pay for all graduates placed in jobs was $82.00 per week.

The U.S. General Accounting Office (1972-A) conducted an intensive evaluation of South Carolina's manpower training program, which involves the State's skill centers, ten State instructional centers, and public and private facilities. The study found that about seventy-two percent of 9,800 trainees had graduated or completed the courses of instruction in which they had enrolled, and about seventy-seven percent of those who graduated were employed. The evaluation study recommended: (1) periodic surveys of employment opportunities; (2) intensive job development and placement services; (3) improved follow-up services for graduates and dropouts; (4) implementation of adequate controls over equipment purchased with Federal funds; (5) development of an improved reporting system; and (6) procedures for follow-up on implementation of recommended changes.

In a similar study, the U.S. General Accounting Office (1972-B) assessed the combined impact of all Federally assisted manpower programs in the Atlanta area. The evaluation concentrated on such activities as outreach, eligibility, identification of needs and abilities, and screening for course assignment. It was found that during Fiscal Year 1970, training was provided for 10,300 persons and job placement for 5,600. However, most of the estimated 70,000 poor in the Atlanta area received no manpower services. The study recommended monitoring the coordination between the Model Cities Program and Concentrated Employment Program as well as consolidation of screening for all Federal manpower programs within one metropolitan area.

A synthesis of a number of evaluation studies of institutional training under MDTA in 1970 was reported by the U.S. Office of Education (1971). The report indicated that: (1) Over-all attendance rate in skill centers was eighty-four percent, comparing favorably with attendance rates in public schools; (2) dropout rates were lower in skill centers located in rural areas or small towns than in metropolitan areas; (3) job placement rate for trainees was 71.5 percent; (4) approximately sixty-three percent of trainees were still in jobs one to two years after placement; (5) interviews among forty-one pilot trainees revealed unanimous satisfaction with the training received; (6) more than seventy-five percent of the employers had favorable comments about the trainees they employed; and (7) program graduates reported being employed a greater percentage of the time, and in jobs providing good fringe benefits.

Conclusions

Probably no component of a model delivery system is more important to successful programs for the disadvantaged and handicapped than that of policy, touching on all aspects of a program. The literature is replete with suggestions and recommendations for National, State, and local policy statements for programs.

Dominant themes--all, in fact, hinging on policy--include the following:

(1) program participants should perceive that they are being understood; (2) curriculum materials should be based on individualized instruction principles; (3) vocational guidance and counseling procedures should be based on appropriate diagnosis, prescription, and placement support; (4) the entire program should be an integrated effort of administrators, instructors, citizens, counselors and consultants; and (5) the program should lead ultimately to job entry and advancement.

Implicit in the literature was the conclusion that in-depth study of the job development/job training/job placement process should be continued and expanded. It seems that the interrelationships between economic growth or decline and job training and placement are so complex and so dynamic that continuous study is absolutely imperative.

Coping with data which allow study of these complex relationships should be facilitated through use of a well-designed, Statewide management information system. Dunn (1973) developed a computer services data processing system to enable North Carolina's community colleges and technical institutes to coordinate their occupational education programs with manpower needs and resources. The system contains information collected from a business/industry survey, a student follow-up survey, and a survey of secondary school seniors. With only slight modification, it could accommodate information necessary for disadvantaged and handicapped categories. The system is available to an institution for extracting information needed for planning, management, recruitment and operations. Development of this system was the result of a study sponsored by the North Carolina Occupational Research Coordinating Unit, using funds from the Vocational Amendments of 1968. It has much in common with the Kansas Manpower Utilization System for Training (K-MUST) mentioned earlier.

An important consideration in any undertaking involving multiple agencies and organizations is that of familiarizing people with program objectives, procedures, and, above all, results or impact of the program. Persons from all segments of society must be sensitized to the special qualities and unique needs of the disadvantaged and handicapped. In addition, they must be made aware of the program requirements for serving these groups, if broad cooperation and support are to be achieved. Strong (1972) cites the following suggestions, which Wisconsin indicated should be carried out in any good public relations effort:

1. Sensitize State and local government to the unique needs of the disadvantaged.
2. Provide inservice training programs to sensitize State and local administrative and instructional personnel to the unique needs of the disadvantaged.
3. Include in staff meetings and communications media regular progress reports on services delivered, and evaluation reports on effectiveness of services.
4. Encourage inter-agency and public and private sector involvement through advisory committees, ad hoc committees, and inter-agency utilization of resources and personnel.

Another form of necessary cooperation involves relationships between social scientists, on the one hand, and policy makers and educators, on the

other. Effective and continuous communication and collaboration is needed to realize a common objective of improving the prospects for self-realization and social development among the disadvantaged and handicapped. The key to success in programs for the disadvantaged and handicapped lies in "getting it all together"--getting all components in proper perspective. J. E. Williams (1970) put it appropriately in a speech to the National RCU Directors, when he stated:

> I interviewed all the trainees of the first training program to be approved under ARA and followed them for more than a year after completion. My conclusion was that they received so much orientation and placement assistance that they would have succeeded if they had received no (skill) training at all. Others have made similar conclusions. So what is the proper mix?

One of the major considerations in planning, implementing and evaluating programs for the disadvantaged and handicapped is that of staff personnel development. The literature indicated that the process must be continuous, that sensitizing personnel to the needs of target groups is a dynamic, on-going activity. The consensus seemed to be that there is need for consistent and long-range planning in education for the less privileged. This same consensus accentuated the importance of teaching basic knowledge and occupational skills, while advocating the development of closer relationships among schools, parents, community, and government agencies. The literature stressed the importance of special, practical, and continuous training of teachers, counselors, and other personnel who work with the disadvantaged.

In order to facilitate the training and development of staff personnel to work with the handicapped, the National Rehabilitation Association, Inc. (1972), sponsored by the U. S. Department of Labor, developed models and methodologies for effectively working with the handicapped. The guide was designed to help administrators, program planners, training personnel, and paraprofessionals in human services agencies to apply the concepts of "new careers" in vocational rehabilitation. Included were concepts underlying the training and supervision of disadvantaged and handicapped people as staff personnel in rehabilitation programs.

SAMPLE PROGRAMS AND PROJECTS

The primary purpose of this chapter is to show the diversity of programs for the disadvantaged and handicapped. No effort has been made to categorize the projects, which were listed in the annual descriptive reports of States and territories and selected at random. Copies of the reports are located in the data collection of Project Baseline. Some of these projects have not been under way long enough to determine impact, and a few of them, admittedly, were not successful.

However, this brief summary supports at least the following positive conclusions:

1) Every State has at least one program for either the disadvantaged or handicapped.

2) There is evidence that needed coordination between agencies is emerging.

3) There is evidence that personal commitment of staff members and financial commitment of government agencies are increasing.

Projects by States

1. In Alabama, the Jefferson County school system (Birmingham) intensified its efforts to serve disadvantaged students by helping them get part-time employment and fitting the educational program to student needs and interests. Positive attitudes toward school and work have increased, and daily absences have decreased significantly compared to previous years.

2. Alaska's State-owned Deer Mountain Fish Hatchery was transferred to the Ketchikan Gateway Borough School for use in food service training of disadvantaged youth, many of whom are males who will get jobs as boat cooks, camp cooks, or in the boat ferry system.

3. In Arizona, the School for the Deaf and Blind in Tucson has an outstanding class in printing and color separation. Arizona also is exerting special efforts to improve the plight of migrant children through industrial arts and homemaking. In two other projects, the State prison experienced less than five percent recidivism among 168 inmates who received training in welding before release, and 756 of 784 disadvantaged adult trainees who completed commercial sewing machine training were placed in needletrades jobs.

4. Arkansas provides services to approximately 29,315 disadvantaged persons and 3,500 handicapped each year. These numbers were expected to increase by 7.5 percent and 8.6 percent, respectively, in Fiscal 1974.

5. California's Berkeley Unified School District conducted a program that provided child care for ten mothers enrolled in high school and in vocational programs. Their children were cared for in the child care laboratory by twenty disadvantaged high school students who were in another project training to become child care aides. East Los Angeles College operated an allied health program in which disadvantaged youth received extra help in communication and mathematics.

6. Colorado had one district that achieved a ninety-one percent placement rate for its 1972 graduates from a program for the handicapped.

7. Connecticut scheduled late afternoon classes in the Vinal Regional Vocational-Technical School in technical skill training so that disadvantaged students could attend academic classes in their local school systems during the regular school day.

8. In Delaware, the Division of Vocational Education, the Department of Corrections, and the du Pont Company worked together to serve inmates in Smyrna Correctional Institution. Du Pont developed a set of programmed instructional materials for use in a "buddy" system in which an inmate who can read helps a non-reader to receive vocational training.

9. Florida, from 1971 to 1972, increased disadvantaged enrollments from 54,000 to 95,000 and handicapped enrollments from 5,800 to 9,500. In Broward County, a mobile unit was used successfully to take home economics programs to disadvantaged persons throughout the district.

10. In 1971, Georgia formulated and tested a model for the systematic evaluation of the effectiveness of disadvantaged and handicapped programs.

11. Hawaii, in 1972, conducted a pilot project in food service training to prepare deaf and hard-of-hearing adults for participation in the tourist industry.

12. Idaho provided two programs, agriculture and welding, for 129 Indian disadvantaged students in the Blackfoot School District.

13. Illinois sponsored a study in 1972 to determine the degree to which physical facilities for vocational programs were adequate to meet the needs of handicapped students wishing to enroll. This study has been adopted as a standard in other States.

14. Indiana conducted an occupational training program for seventy-five dropouts in 1971, with special emphasis on parental involvement.

15. Iowa funded twelve media centers in an effort to improve career information for the disadvantaged and handicapped and expanded "walk-in" centers or "street academies" in an effort to reduce dropout rates.

16. Kansas provided an opportunity for fifty-nine disadvantaged youths, fifteen to twenty-one years old, to explore various vocational fields. The coordinator visted the homes of students to build parent support for the program.

17. Kentucky had its Instructional Materials Laboratory prepare five units of instruction for disadvantaged students in business and office edu-

cation. Each unit was an individualized instruction package.

18. Louisiana's projected enrollment of 49,004 disadvantaged students was exceeded by 20,046 in 1972, for a total of 69,050.

19. Maine provided training in auto repair, welding, building trades, graphic arts, and electrical wiring to inmates aged 16 to 26 at the Men's Correctional Center in South Windham.

20. Maryland provided a mobile unit to make vocational evaluation services available to schools for the mildly mentally retarded.

21. Massachusetts maintains a Visual Learning Center in Boston for the multi-handicapped blind young adult. Instruction includes daily living, vocational evaluation and education, and work experience.

22. Michigan's Disabled Disadvantaged Sub-Program assists the disadvantaged, particularly public assitance recipients, to develop employability skills.

23. In 1971, Minnesota provided a method by which the area vocational-technical schools could apply for reimbursement for tuition of disadvantaged students who could not otherwise attend school.

24. Mississippi constructed a new facility at the Tupelo Branch of Itawamba Junior College for use in instructing the handicapped. The first students were enrolled in 1972. Instruction is offered in six different areas of Vocational Education, primarily for educable mentally retarded and emotionally disturbed persons.

25. Missouri began a program for the disadvantaged in the Kinloch School District on a "continuing day" basis. Courses are offered in shorthand, office practice, typing, business English, business math, and sewing.

26. Montana conducted a program in 1972 for fifty students, aged fourteen to sixty-five, in the Billings Vocational Evaluation and Specialized Training Center. The Billings center is viewed as a laboratory setting for students to participate in "real work" as well as simulated situations. Diverse supportive services are offered to ensure student success.

27. Nebraska initiated a program to train mentally handicapped students in the Education Service Unit #6 of Lincoln Public Schools. A time-clock system was used to teach punctuality, and an on-the-job training component followed each of five instructional levels.

28. Nevada operated programs for the disadvantaged that were focused on aiding student movement ot other levels. The pre-vocational program at Traner Junior High School emphasized vocational awareness in construction trades.

29. New Hampshire, in assessing its 1972 work-experience program for the disadvantaged, said: "It has been determined that if a youngster was deprived of the work opportunities, his school relationship would falter and deteriorate. So dependent is the successful school experience upon the job opportunity, the cutback in the total hours per week participants

could work proved to be our greatest handicap."

30. In 1972, New Jersey markedly increased its development of innovative pre-vocational Employment Orientation Programs. Salem County Vocational School established the first regional Employment Orientation Center in the State. The center offers services that are closely coordinated with vocational programs offered in the county and which are available to all disadvantaged and handicapped students.

31. New Mexico's State vocational agriculture section cooperatively developed a successful horticulture and floral arrangement program with the State Girls' Welfare Home to meet the needs of institutionalized, disadvantaged young women. The program provided stimulus toward long-range goal-setting for the students.

32. New York emphasizes elements of cooperative work experience in all secondary occupational education programs for the handicapped, including independent, semi-sheltered, sheltered, and summer work experience. The Nassau Building of Cooperative Educational Services considers work-experience a vital tool in the completion of occupational education for the handicapped.

33. North Carolina designed curricular components to prepare severely disadvantaged students for entry into regular occupational education programs. These materials consisted of "mini" units of mathematics and communication skills used directly with specially designed learning activity packets in trade and industrial, business, agriculture, home economics, and health education.

34. North Dakota serves the majority of its disadvantaged through existing programs by establishing an extra class period that includes individual help from instructors, individualized study packages, and student-tutoring-student activities.

35. Ohio conducted a project in Youngstown to increase employability of young disadvantaged job seekers through education and training adapted to their ability levels and directly related to skills in general construction and industrial plant maintenance. Attendance patterns improved, as did student performance.

36. Oklahoma has developed a management information system that has been ranked by Project Baseline as being among those at the top, if not the best in the U. S. The total system includes the following subsystems: (1) Student Accounting System (enrollment, completion, follow-up data); (2) Instructional Personnel; (3) Instructional Programs; (4) Finance; (5) Facilities and Equipment; (6) Evaluation; and (7) Manpower Needs. Services to the disadvantaged and handicapped are enhanced through such information systems.

37. Oregon implemented in its Portland School District #1 a "no fail," individualized vocational program that leads to a high school diploma for both disadvantaged and handicapped. The program also uses the open-entry/open-exit concept to great advantage.

38. Pennsylvania's Chester County School for Exceptional Children

conducts a thirty-six week training program in grounds and building maintenance for mentally retarded persons. The program uses a ten-acre laboratory, plus additional facilities located near the school, to provide on-the-job training.

39. Puerto Rico established a special Vocational Education center at the Hostos School in Puerto Neuvo to develop and implement individualized instruction in trade and industrial, distributive, health, and home economics education for disadvantaged and handicapped. The program served 643 persons the first year and 706 the second year.

40. Rhode Island conducted a program designed to expose poorly motivated deaf students to the world of work. Included in the program were job application procedures, job interview training, on-the-job skill training, and placement.

41. South Carolina has enrolled disadvantaged junior high school students in a program with a varied rotational schedule in an effort to help them catch up academically and acquire vocational skills. The program, in Spartanburg School District #4, has operated about three years with recognized success.

42. South Dakota offers voluntary selection of courses and work release in a training program for inmates of the State penitentiary. Job referrals are made after final release.

43. Tennessee's Memphis Vocational Division added an innovation to the career education counseling services by purchasing a Career Education Information and Counseling Mobile Guidance Center, the "Candy Van." The Tennessee State Department of Vocational Education, through a program serving disadvantaged young adults, provided the funds. The mobile unit served as a major means of contact in local neighborhoods, bringing information to people where they lived. It was placed on school campuses, near community centers, welfare and health departments, churches, and local gathering places. The counselors assessed the needs of adults and referred them to Vocational programs in the Memphis area. High School seniors also received information about career education and opportunities after graduation. Approximately 3,500 people were served by the mobile unit between January and June of 1972.

44. The Texas program for the disadvantaged, the Coordinated Vocational Academic Education Program, provides students with Vocational Education and academic work that departs from traditional methods in order to assure success. In 1971-72, 765 such programs operated in the State and involved 20,829 students.

45. Utah's Research Coordinating Unit for Vocational and Technical Education evaluated a project that used a mobile office education unit with migrant workers in the Box Elder School District. Evaluation results revealed that trainees learned typing skills and increased their abilities in spelling, reading, arithmetic, and English.

46. Vermont combined occupational training and work experience for disadvantaged students who had low achievement levels. Special orientation and inservice work with faculty members enhanced the success of the program.

The program eliminated some school problems, improved student attendance, decreased discipline problems, created interest in student jobs, and provided much needed wages for students.

47. The Virgin Islands developed a low-level clerical skills program for thirty disadvantaged students in the St. Thomas-St. John School District. All the students were placed in jobs.

48. Virginia served 640 disadvantaged students in twelve different vocational subject areas in Petersburg. The students' self-esteem as well as their attitudes toward education and work improved due to guidance and job information activities.

49. Washington's Franklin Pierce School District designed a program entitled "A Poor Boys/Girls Farm." The program provides disadvantaged students opportunities to learn and experience practical and profitable methods of raising gardens, livestock, and poultry on small plots of land. The students get "hands-on" experience and see the changes in products with which they are working.

50. Washington, D.C., gears most programs in its vocational schools toward the remediation of communication and computation skills and reading improvement.

51. West Virginia provides training for disadvantaged senior high school students--some with physical handicaps also--in a nurses' aide program in Roane County. It is a separate program, but students are enrolled in academic courses.

52. A Wisconsin project, "Neighborhood Recruitors in Central City," Milwaukee, uses disadvantaged persons as recruitors in outreach efforts to bring other disadvantaged persons into specially designed Vocational Education programs. Also, Data Processing Mobile Units, using record equipment and appropriate instructional aids, serve twenty-eight schools in the State.

53. Wyoming's "Career Food Services for Disadvantaged Students" develops interests in food service jobs and trains students for waiter/waitress and assistant cook positions through a "mini-cafe" approach. Good grooming, personality development, sanitation, and safety also are stressed in the program.

REPORT SUMMARY AND RECOMMENDATIONS

A vast number of complex forces influence the characteristics of people and the conditions in which they find themselves. The task seems to be, then to discover causes of the conditions of the disadvantaged and handicapped and to devise means for remedying the causes. Great strides have been made in remedying problems of the disadvantaged and handicapped. This document reviews only a minute percentage of the many programs that have dealt successfully with those problems.

Periodically, someone raises the question of whether the Nation is continuing its commitment to serve the disadvantaged and handicapped. Momentum gained in the late 1960s and early 1970s seems to be subsiding, according to some persons. However, the details furnished by other knowledgeable people tend to counter this.

For example, Hensley (1973) states that: "After years of neglect, a substantial and growing proportion of the Nation's mentally and physically handicapped children are now receiving special education services."

There are approximately seven million school-age handicapped children in the Nation, and approximately forty percent are now receiving the special education they need and deserve. Hensley noted that forty-eight States "now have legislation mandating some kind of educational service for handicapped children." Furthermore, several States have enacted comprehensive legislation "emphasizing individual diagnostic, instructional, and evaluative services."

The passing of such legislation by States sets in motion some far-reaching possibilities. Hensley predicted that, once the legislative impact starts to take effect, "If the momentum of the past few years were to be accelerated in the next few, it is conceivable that more than ninety percent of the Nation's handicapped children would be receiving appropriate educational services by the end of the decade."

Concentrated study is needed to create programs for the disadvantaged and handicapped. Many program guidelines seem to be slowly evolving. No listing would ever be all-inclusive and complete, but the following activities approach what is needed to provide the necessary programs:

1. Development of a comprehensive National-State-local program aimed at total human resource development, which will integrate: (1) identification of and accounting for disadvantaged and handicapped persons, and others; (2) vocational and personal guidance and counseling (3) occupational and other educational options; and (4) job placement and adjustment.

2. Development of long-term programs to train personnel to operate this comprehensive human resource development program--personnel trained to seek, store, retrieve, and utilize information on people's ambitions, interests, aspirations, abilities and skills and articulate these

data with labor market needs, demands and restrictions, and job placement and adjustment techniques.

3. Development of an educational program with individualized instruction that is self-paced, self-adjusting, closely monitored, and motivational--a program that prevents dropouts, eliminates dependency on others for learning, instills self-initiation, and serves all those who need to be served.

4. Development of alternatives and options at all levels, including diversified programs at the post-secondary and adult levels, open-entry and open-exit programs, and special alternatives for special groups, such as dropouts, ex-offenders, the elderly, and the rehabilitated.

5. Development of a program to increase political skills (gathering information to support legislation, monitoring government agencies, seeking and increasing funding sources, lobbying and direct political action) among educators and citizens who are concerned about the disadvantaged and handicapped.

The literature reviewed for this report identified a diversity of barriers to success in living and employment that are encountered by the disadvantaged and handicapped. These barriers tend to define as well as characterize the two groups. Barriers to employment as found in a study of the disadvantaged:

	Type of Barrier to Success	Percent of Disadvantaged
1.	Lack of work skills and basic education	87%
2.	Personal problems (financial, marriage, etc)	23%
3.	Health problems	23%
4.	Physical problems	20%
5.	Transportation problems	17%
6.	Poor work history	9%
7.	Poor work habits	7%
8.	Child care problems	5%
9.	Poor appearance	1%
10.	Conviction record	1%
11.	Other (includes poor attitude, retardation, poor behavior, unrealistic goals, legally blind, etc.)	1%

The literature contained the following general kinds of attributes that are needed by the disadvantaged and handicapped in order to function in society: (1) cognitive development; (2) sense of identity and self-esteem; (3) skills needed to get a job and earn a living; (4) ability to manage one's own affairs; (5) consumer awareness; (6) ability to engage in concentrated activity involving the whole of one's energies for extended periods;

(7) ability to deal with persons of different ages, races and backgrounds; (8) sense of responsibility toward dependents; and (9) ability to cooperate with others to achieve some collective goal.

The mere possession of the above attributes does not guarantee success in life, in a job, in marriage, or in any other aspect of living. But with these attributes, a person has a greater probability of success in surmounting social and personal problems. Also, job satisfaction continues to play an important role in success. Quinn, et. al. (1974) states: "The job satisfaction of blacks and other minority groups fluctuated as much as thirteen percent during the same 10-year period (from a low of seventy-six percent in 1962 to a high of eighty-nine percent in 1971)."

Hence, the challenge to Vocational Education and manpower personnel is clear. The National Committee on Employment of Youth put it succinctly: "Vocational educators therefore have to be more responsive to new ideas, and more willing to experiment. They will have to accept the idea that 'zero rejection' policy is feasible and get their satisfaction from training the 'untrainable' rather than ruling out those who need the training most. At the same time, they will have to adapt to their students' needs and set their policies accordingly."

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